



National Office of Global Maritime Situational Awareness

Overview

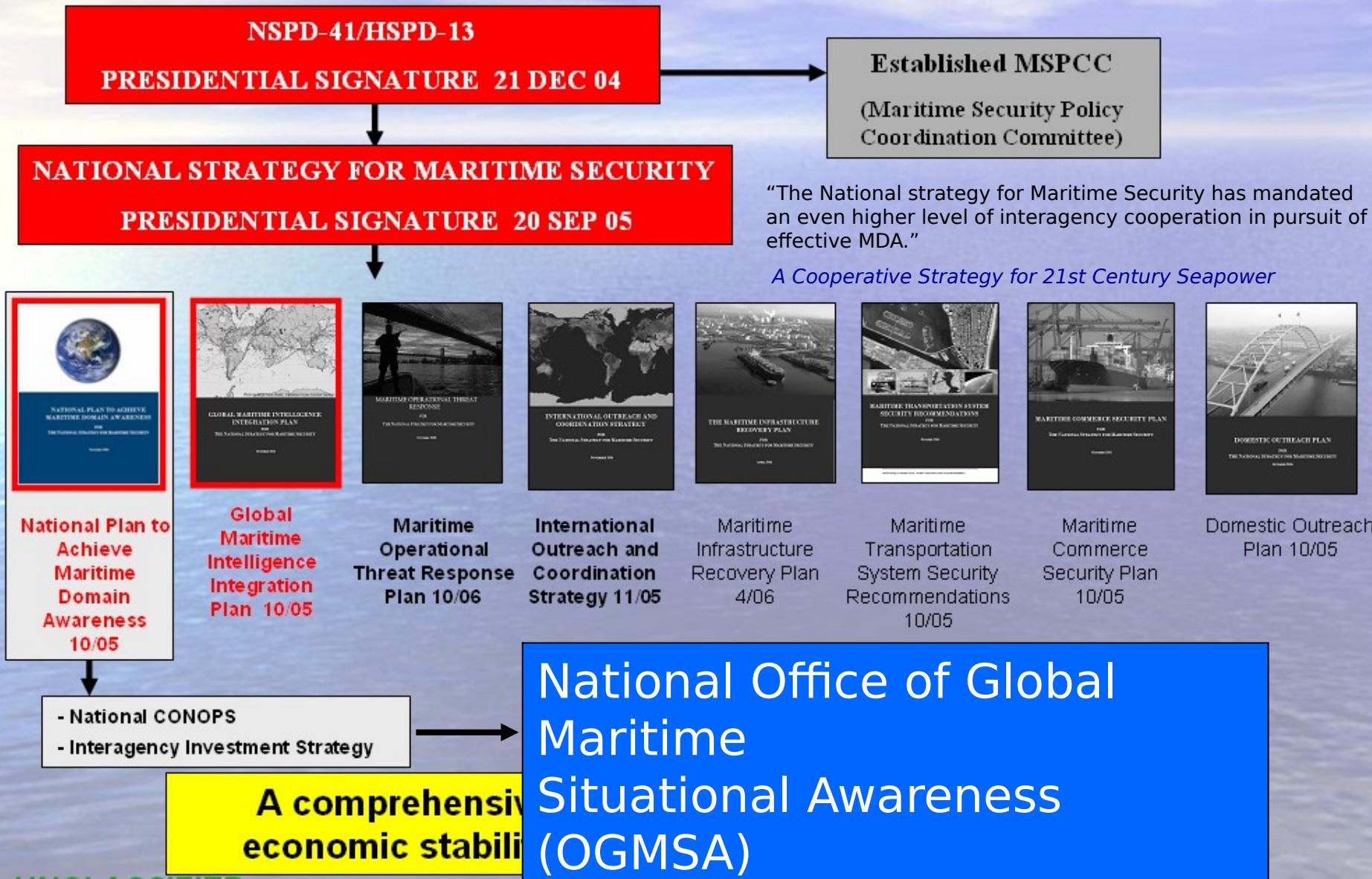
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The Overall Classification
of this Briefing is:
UNCLASSIFIED

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How We Got Here...





Vision, Mission, Goals, & Objectives

Vision

A World-Wide Maritime Information Exchange to facilitate user-defined decision making

Mission Statement and Goals

To create a global maritime collaborative information environment through unity of effort across entities with maritime interests. This mission is reflected in the following strategic thrusts:

- Make maritime related information available;
- Facilitate development of a dynamically tailorabile, network-centric, virtual information grid.
- Align relevant Policy and Technology.

Strategic Goals & Objectives

- Lead a collaborative effort to ensure access to maritime information and data critical to building the situational awareness component of Maritime Domain Awareness (MDA).
- Develop and recommend information-sharing policies, protocols, and standards across federal, state, local, tribal, private sector, and international partners.
- Create open forums to enhance understanding, encourage global partnerships, develop shared perspectives, and achieve unity of effort in meeting the challenge of developing global maritime situational awareness.

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Strategic Objectives

1.0 Create MDA Info Enterprise Hubs - (4 - People, Vessels, Cargo, Infrastructure)

2.0 Create MDA Architecture Hub

3.0 Maximize transparency of vessels in the maritime domain

4.0 Identify and encourage strategies that enhance national maritime security, safety, and environment through the use of market drivers.

5.0 Establish OGMSA Office/Staff infrastructure to enable the above



National Office of GMSA

Mission: Enhance national maritime security, safety, environment, and commerce through optimizing information sharing on the global, federal, maritime, state, local, and tribal levels.

Vision: A World-Wide Maritime Information Exchange to facilitate user-defined decision making.

“Maritime Information flowing to the right people at the right time.”

Values / Guiding Principles:

- Encourage dialogue (information sharing) between countries.
- Increase stability / ability of countries around the world.
- Transparency - promoting culture of information sharing.
- Multilaterally, low barriers to entry, high U.S. support, small fingerprint.
- Maritime security - supporting common opportunities.
- Collaboration / integration - supporting unity of effort.
- Support all MDA customers but security is paramount.

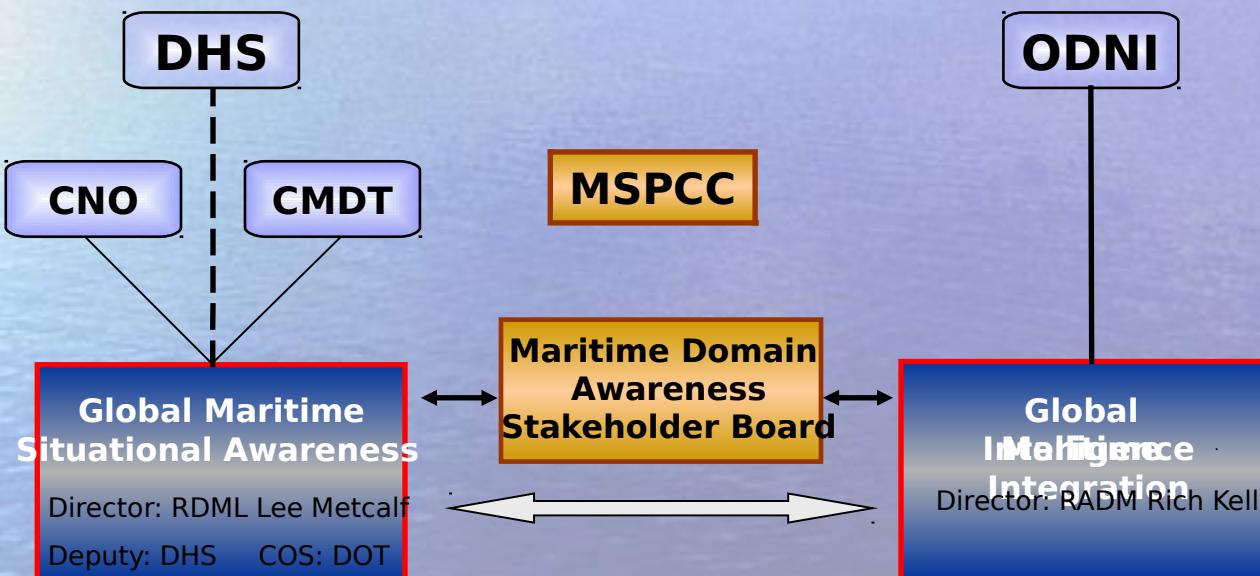
Slogan: A National Office ... Composed of an Interagency Staff ... with a Global Reach

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National MDA Structure

A federal, interdepartmental and interagency leadership structure



Situational Awareness + Sense Making = Maritime Domain Awareness



Maritime Awareness

Observables

- People
- Facilities
- Cargo
- Infrastructure
- Sea lanes
- Threats
- Friendly forces
- Environment / Weather
- Economic

Collect
Disseminate

Fuse

Analyze

Decide/Act

- Strategic
- Operational
- Tactical

GMSA
strategic area of focus



- National CONOPS for MDA
- Interagency Investment Strategy

Mission Task Sequence

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Collaborative Leadership

Uncoordinated
MDA
Initiatives

National Strategy for Maritime Security
National Plan to Achieve MDA
8 Supporting Plans

MDA
Synergy



Other
Agencies

State

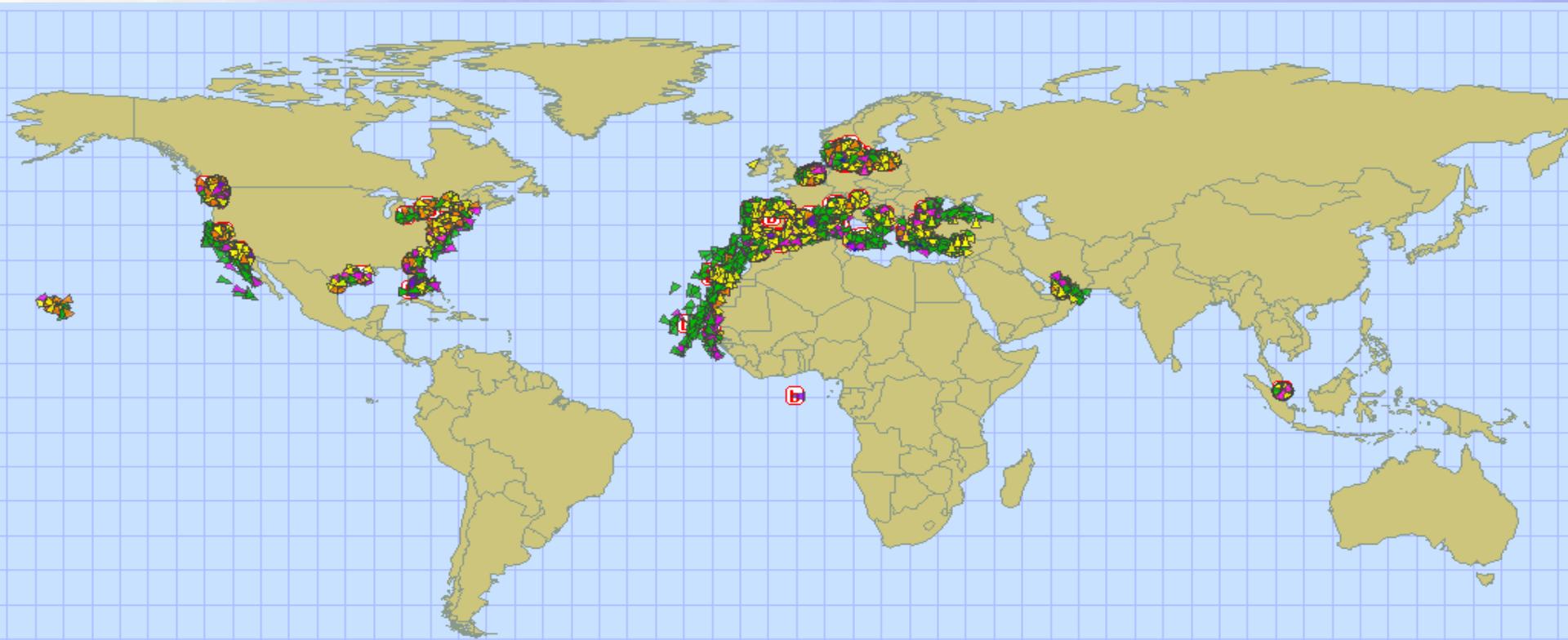
Local

Private

Tribal



AIS Data Sharing Today



GMSA Role in acceleration of Global Information
Sharing
2009 by 2009



Maritime Security and GMSA

"Key to maritime security and that which is the foundation for maritime security is the awareness of that which is moving above, on, and under the ocean, or maritime domain awareness.

- What must we do to enhance that?
- And what are the initiatives and programs...
- that we must pursue collectively, cooperatively, collaboratively to enhance the maritime security of the world?
- That is an expanded core capability."

- Remarks as delivered by Adm.

Gary Roughead, International Sea Power Symposium, 17 October 2007

"Work remains to ensure the long term viability of MSSIS and the unclassified component of Global Maritime Situational Awareness (GMSA)....Over the long term, I believe that an international organization is the right fit to enforce standards governing maritime traffic and information exchange, just as we do in the air."

- Letter from NAVFUR, Adm. Uhlrich, to CNO, Adm. Roughead, 11 October 2007.



Global Maritime Situational Awareness

What it is:

- Global
- Coalition / International
- Joint & Interagency
- Security Partnerships
- Information Sharing
- All Threats
- Origin to Delivery
- A Continual Process

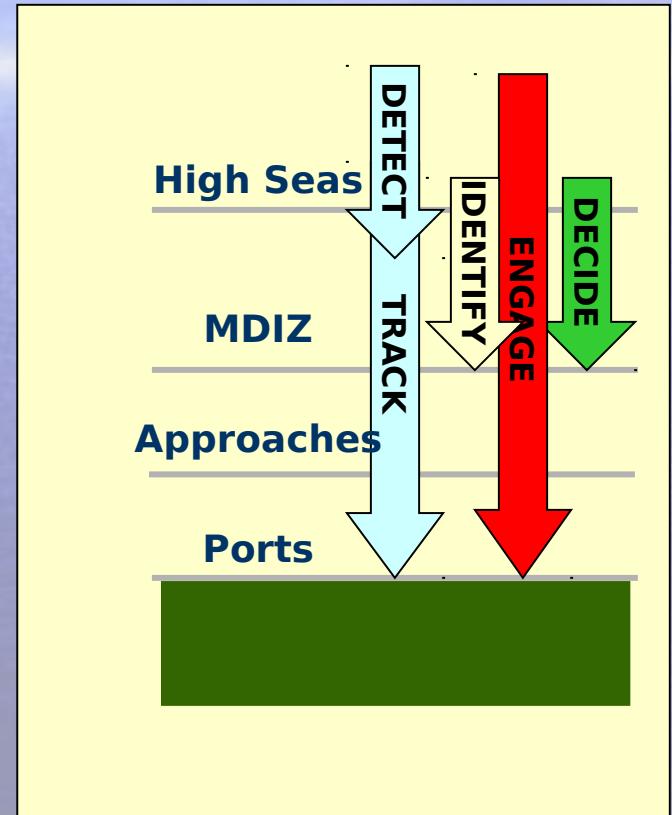
What it isn't:

- Just Homeland
- U.S. Only
- Just Defense
- Just Vessel Tracking
- Just Intelligence
- Just Terrorism
- Just More Sensors
- An End State



CONOPS

MDA will enable a defense in depth that will be capable of supporting interdiction of internal and external threats across a full geographic spectrum at their source... In the U.S. internal and territorial waters, in U.S. maritime approaches, on the High Seas and foreign ports and harbors....



Objective

Detect, deter, ~~and~~ defeat maritime threats

Promote global economic security

Develop World-wide maritime information exchange

Desired Effects

Nations/Agencies seek stability and control in their sovereign waters

Nations/Agencies desire to enter collaborative maritime info-sharing relationships

Nations/Agencies desire maritime situational awareness

Nations/Agencies remove policy barriers to info-sharing

Nations want to be regional leaders for info-sharing

Nations/Agencies develop incentives to participate in info-sharing

Actions

- Create / administer Information Enterprise Hubs
- Create Architecture Hub
 - Promote Stnds & protocols
- Develop / promote info sharing policies
- Promote information sharing initiatives
 - Engage govt/commercial/private

- Promote MDA initiatives
- Monitor implementation of MDA initiatives
- Implement Stakeholder Board
- Create CONOP & Investment Stgy Spirals
- Promote “market drivers” to promote info exchange



Tasks

Data Sharing & Infrastructure

- HUB S/U, implementation, Mgmt
 - Arch
- MSSIS - Tech/Security
- DSCOI
- SECNAV Prototype
- MDA Connectivity II
- Collaborative S/W
- State Fusion Ctrs
 - LINX

Outreach & Coordination

- MSSIS - Marketing
- Stakeholder Board Exec Sec
- SHB Charter
- Oceans US
- Commercial / Intl Outreach
- Conf / Proj Mgmt
- Interagency/COCOM

Science & Technology

- Coordinate Technology Awareness/ Cross fertilization/C
- ACTD/JCTD Consolidation/Assistance
- Update MDA Technology Roadmap
- Analysis/War game support

Administration

- Clearances
- FITREPS/OERs/Evals
- Correspondence
 - Memos, invites, Thank yous
- Facility mgmt
- Resources
- Staff Mgmt (Active, ADSW, Contractor)
- Trip Accounting
- Tickler
- Hail/Farewell - MWR
- Awards

PAO

- Strategic Comms
- Strategic Engagement
- Articles/Press release
- Rumbline / Polaris
- "MDA Earlybird"

Planning & Policy

- MOAs
- MSPCC Prep
- MSWG
- HUB S/U, implementation, Mgmt
 - Info (V,P,C,I)
- Plan Maintenance
 - CONOPS
 - IAIS
- Policy Barriers
 - MDA Connectivity II
 - Prototype
 - MSSIS
 - MDA DS COI
- Assessment/MOP/MOE
- Business Plan / PO A&M
- "911" - Pop-up briefs



Relevance to Navy

OGMSA Roles

- The OGMSA will play a key role in supporting the Navy in its capacity as the Executive Agent for MDA within the Department of Defense
- Director OGMSA (USN Flag) is direct representative for Navy in the Interagency arena as a member of the Maritime Security Policy Coordination Committee (MSPCC).
- Co-Chair Interagency Stakeholder Board

OGMSA and MDA Initiatives

- National CONOPS & Investment Strategy
- Maritime Safety and Security Information System (MSSIS)
- MDA Data Sharing Community of Interest; MDA Connectivity II
- DoN Prototype
- MHQ/MOC, SCC
- Global Maritime Partnerships
- Enterprise Information Hubs
- Architecture Hub

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OGMSA Strategic Engagement

- Navy: SECNAV, FLTs, N1, N2, N6, ONI, ONR, IPO, NWC, NNWC, CNA, SPAWAR
- Joint: OSD, JCS, COCOMS, JIATFs, NATO
- Interagency: NSC, HSC, DoS, DoT, DHS, DoJ, DoC, GMII, MARAD, NOAA, EPA, Volpe
- International: Various
- Commercial: Various commercial agencies/associations

“...U.S. Naval forces will partner with a diverse array of multinational, federal, state, local and private sector entities to ensure freedom of navigation, the flow of commerce, and the protection of ocean resources. Key among those partners, both abroad and at home, is the U.S. Coast Guard. ”

**Naval Operations Concept
2006**



OGMSA - Driving MDA Forward

July 2007: OGMSA Stood Up: staffing: N3/N5 out of hide, RC, CG, and PT I-A support

Aug/Oct: Align Roles/Responsibilities/Processes between GMII and GMSA

Engaged across Inter-Agency and Internationally (NATO, Singapore, Austr...)

Achieve consensus on Charters for Stakeholder Board and I-A Info Hubs

Closed out first pass at: MDA Nat'l CONOPS; Investment Strategy

Ensure Agreement on key MDA Issues at MSPCC and DC levels

Oct: Stood up Inter-Agency Body: Cargo Information Enterprise Hub

Nov: Stood up USG MDA Stakeholder Board

Aug/Dec: Engaged COCOMs to align MDA implementation plans:

- Align/Shape NORTHCOM/DHS Oversight
- Align/Shape JFCOM, STRATCOM MDA activity (Exercises, Experiments, JCTDs)
- Align/Shape MDA Regional Strategies: PACOM, SOUTHCOM, NORTHCOM, NAVFUR,

Dec: Stand up Inter-Agency Bodies: People, Vessel, Infrastructure MDA Info Sharing Hubs

Jan 2008: Stand up Inter-Agency CIO driven MDA Architecture Hub

Oct/Feb: Align I-A & Global Vessel Tracking Plan: National Strategy for AIS Collection;

IMO Engagement Plan, Commercial Outreach, Focused R&D and Experimentation

Oct/Mar: Congressional MDA Engagement Plan: OSD, DHS, DoS, ODNI aligned plan



Implementation Timeline

OCT 2007

JAN 2008

APR 2008

OCT 2008

Information Hubs

Cargo
Pilot
Start

Pilot Phase I

Noble Resolve

People

Pilot Phase II

Full Hub
Implementation

Outreach & Coordination

Architectu
re

Phase I

Phase II

Vessel

Infrastructure

DS COI

DoN Prototype

Policy Barrier Removal

National MDA CONOPS Implementation

Stakeholder Board

Monitor MDA Effectiveness

Monitor implementation of MDA initiatives

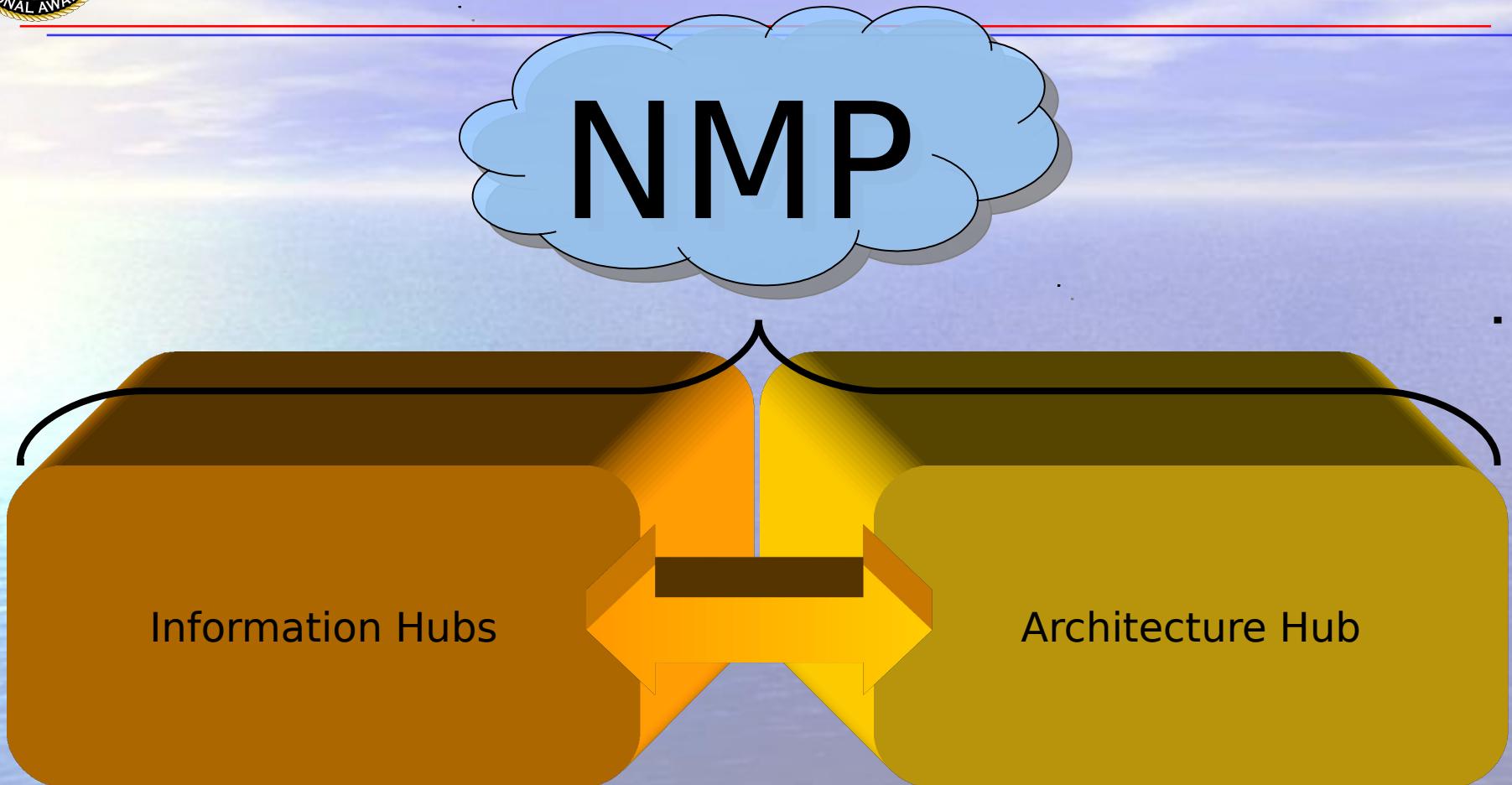
INFORMATION
SHARING

GOVERNANCE &
OVERSIGHT

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Priorities

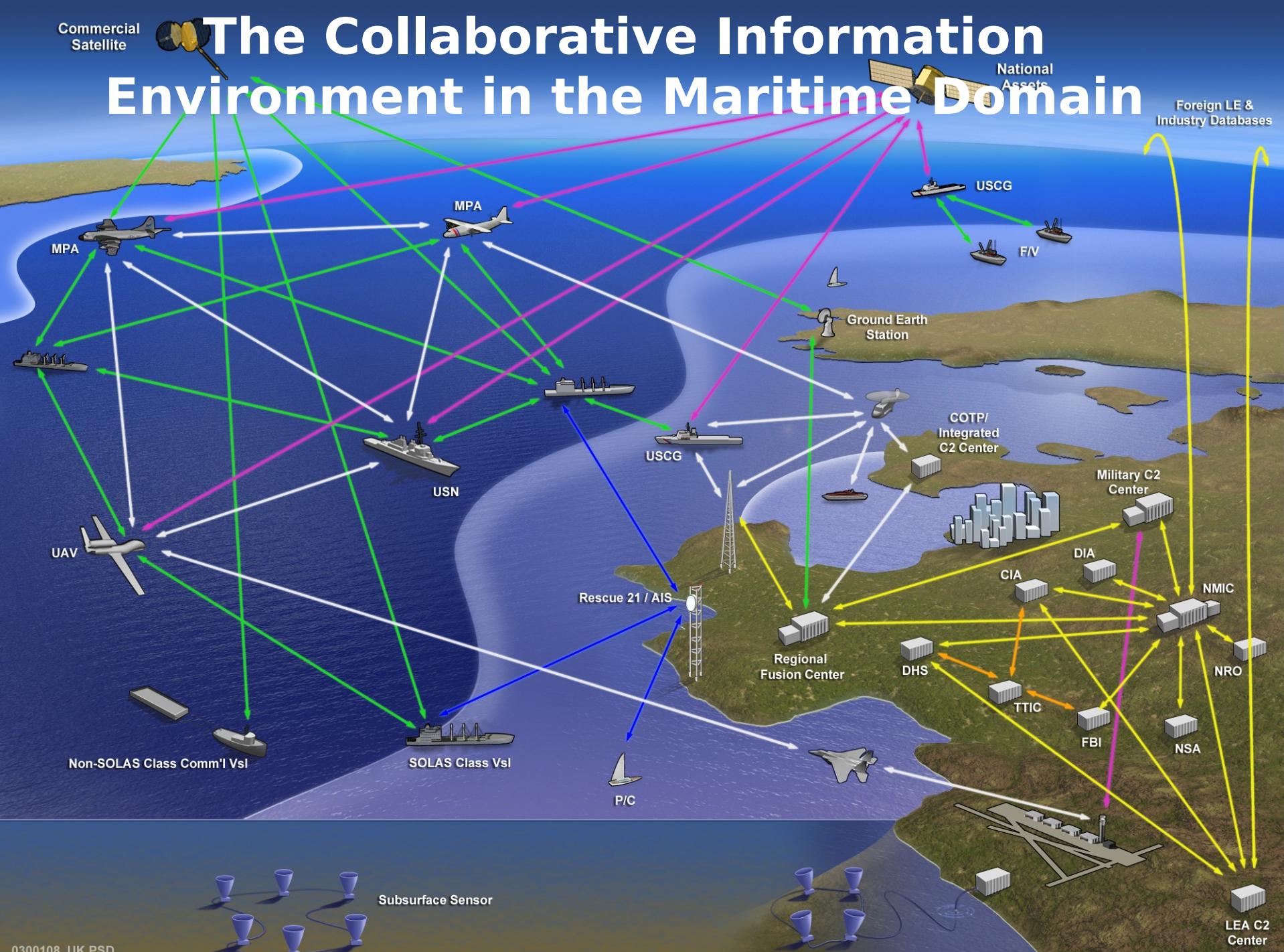


Commercial
Satellite

The Collaborative Information Environment in the Maritime Domain

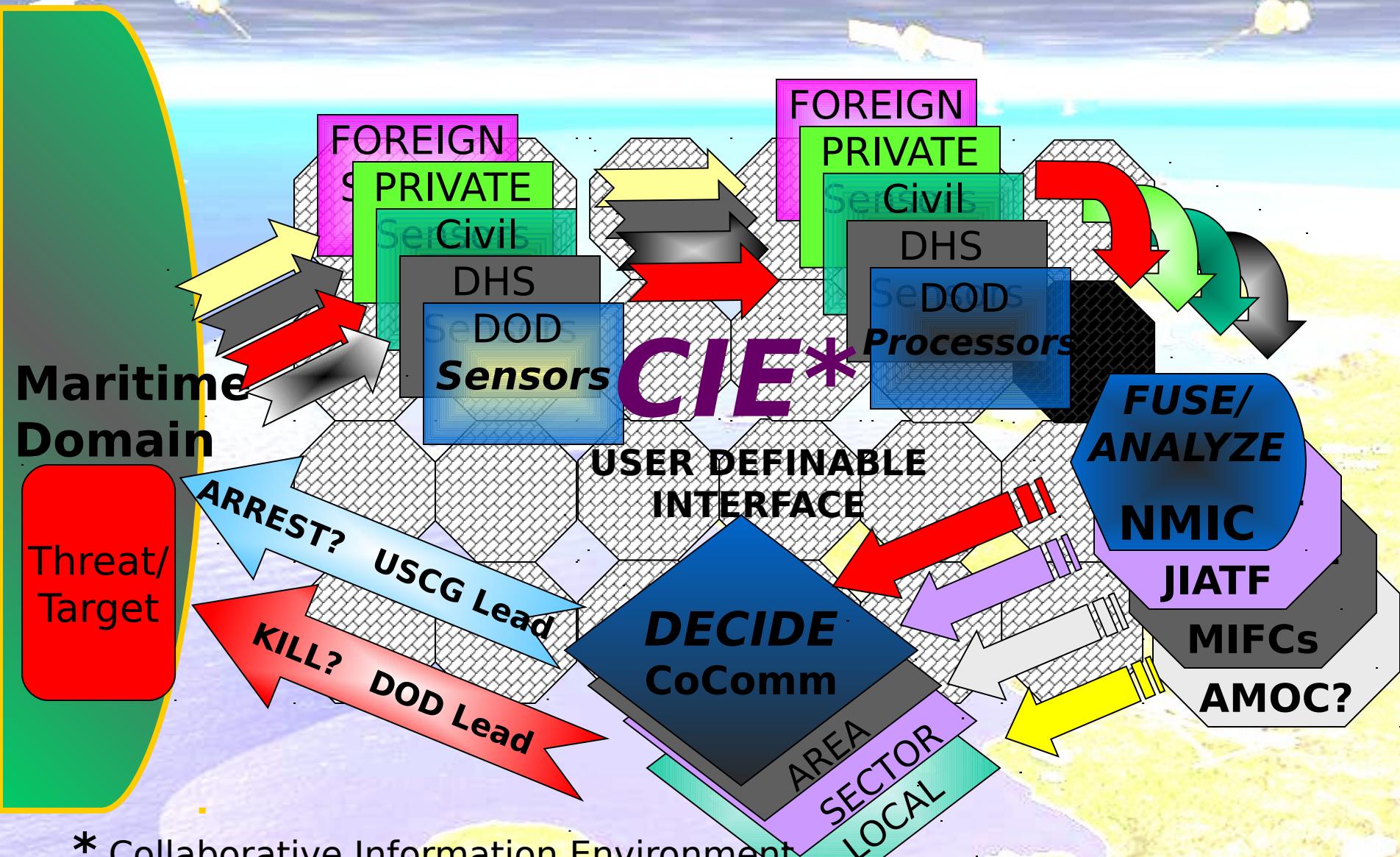
National
Assets

Foreign LE &
Industry Databases



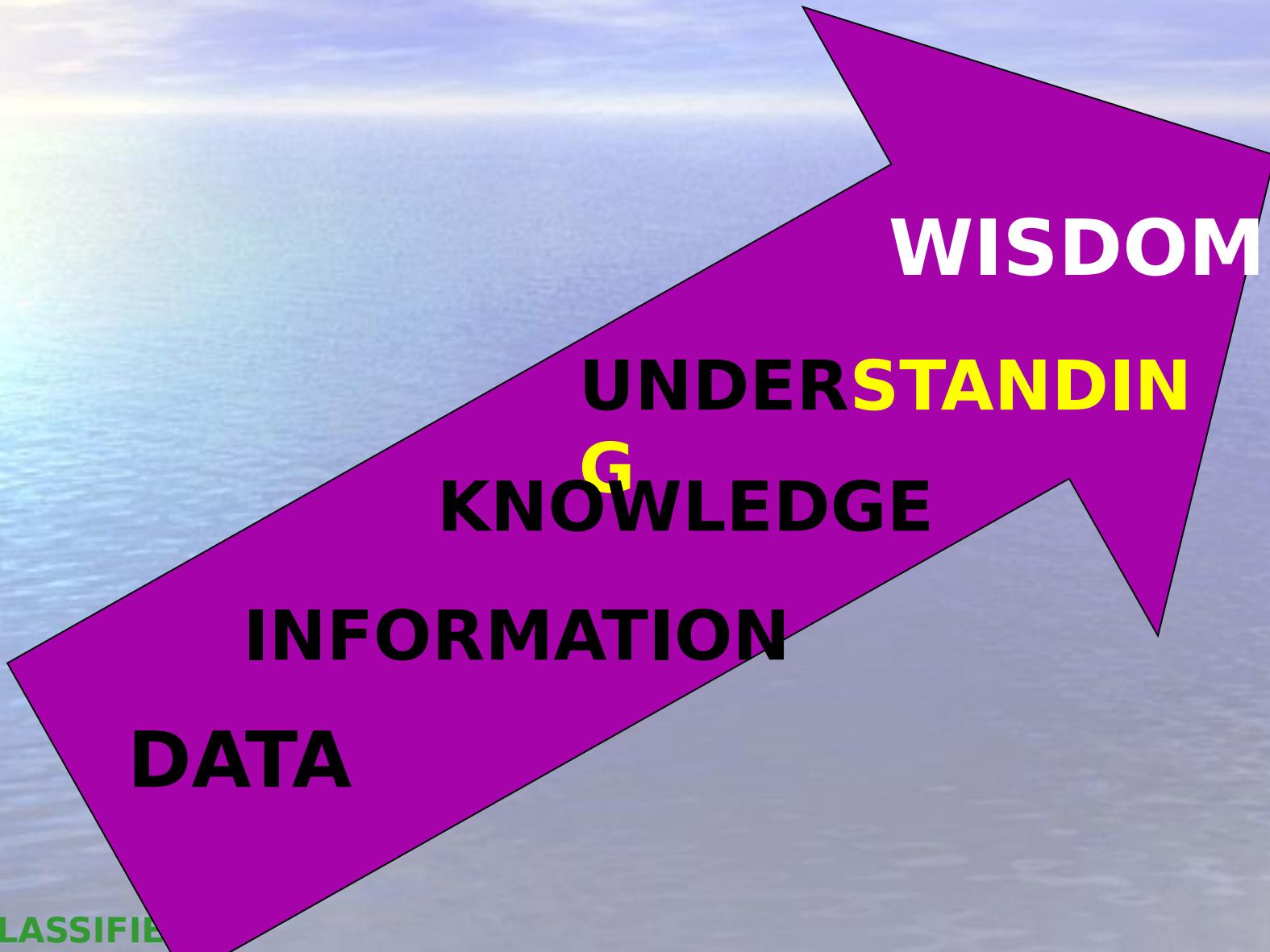


Sense - Decide - Act Cycle





The Information Continuum





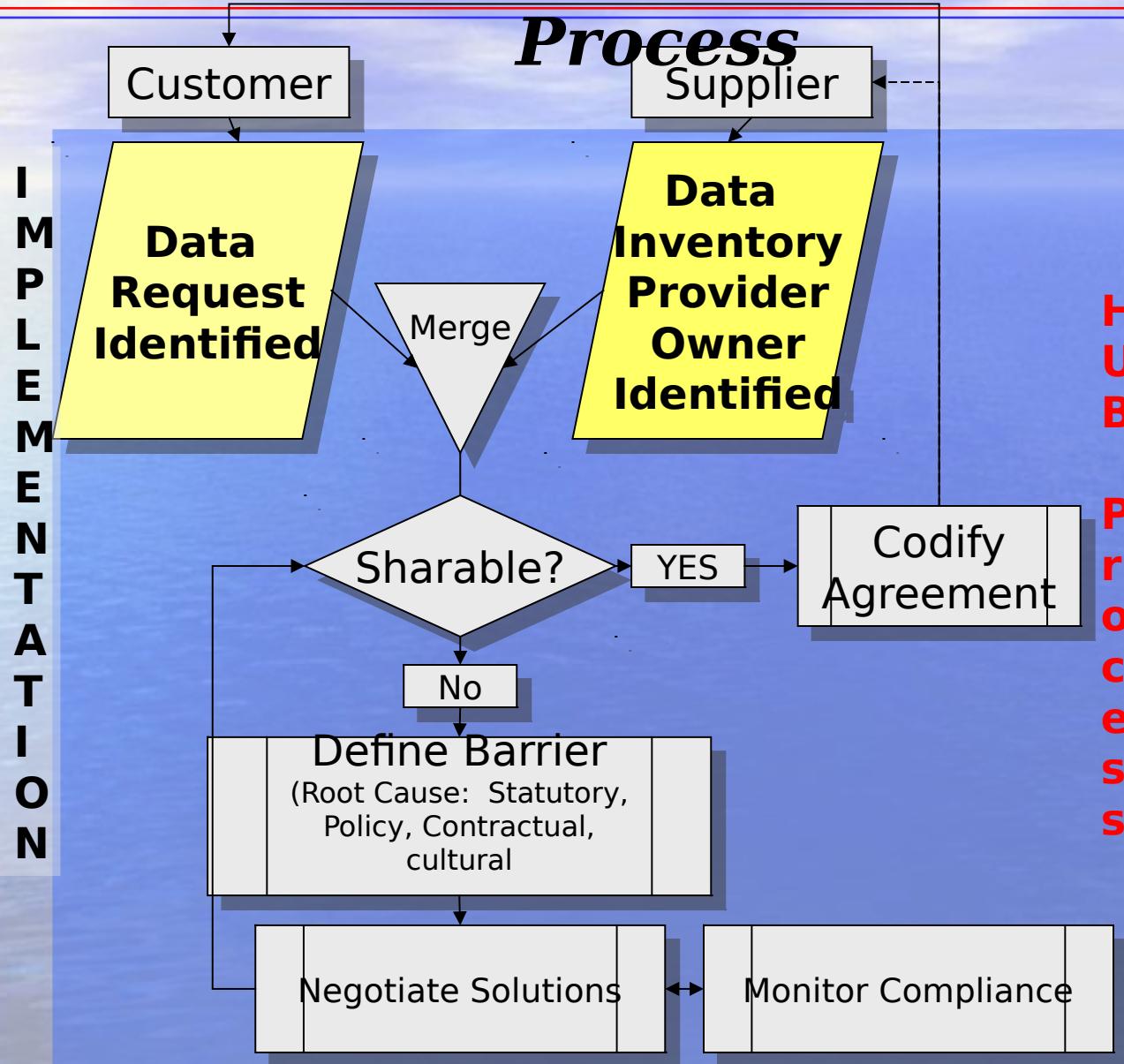
Role of an Enterprise Hub

- The hub lead will act as the single POC for its pillar of information
- The lead will identify SMEs when needed
- Collaborate among themselves
- Facilitate the resolution of technical problems and impediments to sharing
- Make recommendations for improvement to or development of capabilities
- Identify requirements as they apply to their areas of expertise
- Recommend analysis products
- Recommend appropriate information sharing standards



Information Enterprise Hubs

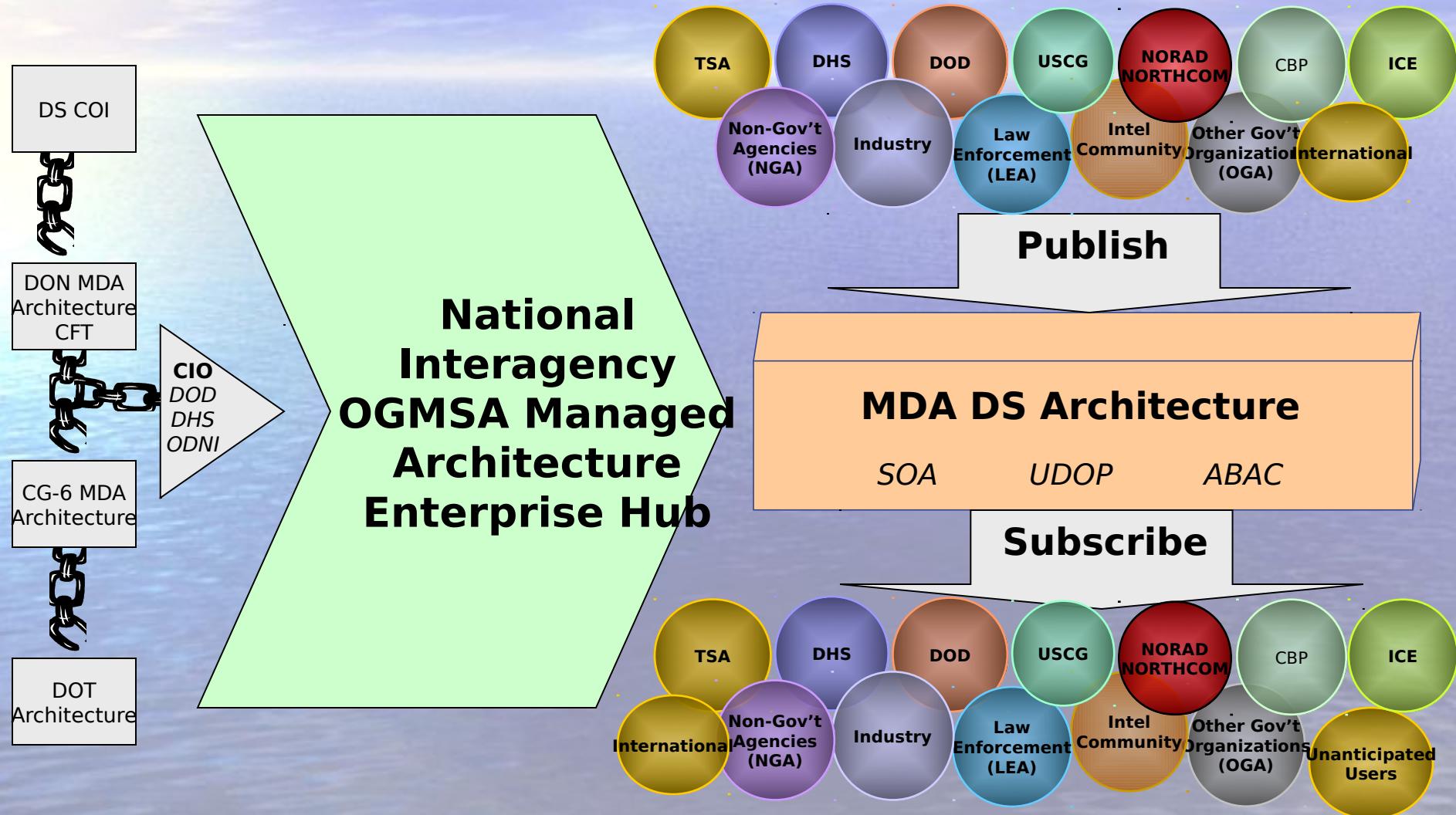
Core Process: Barrier Resolution





MDA Architecture

2006 → 2007 → 2008 → 2009 → 2010



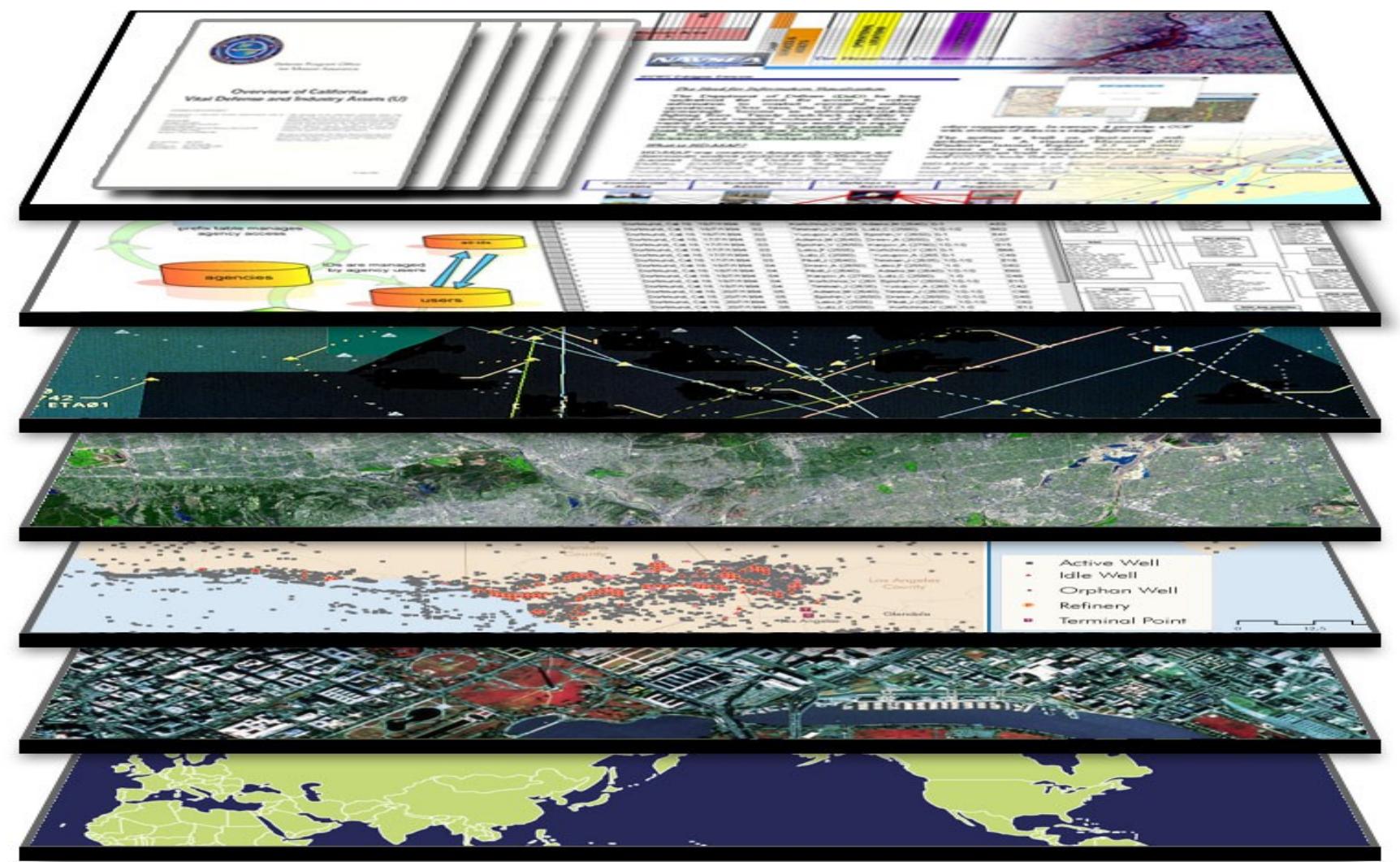


Leveraging RC Resources

- Maritime Partnership Program (MPP)
- Naval Cooperation and Guidance of Shipping (NCAGS)
- Merchant Marine Individual Ready Reserve Group (MMIIRRG)



Net-Centric Approach





Navy Program Support

- DoN MDA Prototype Initiative
 - Spiral 1
 - Spiral 2
- USN MDA Capabilities Based Assessment (CBA)
 - OPNAV
 - Navy MDA CONOPS
 - MHQ – MOC (MDA Equities)



Building the National Maritime Picture

National Maritime Picture



Information, Architecture and

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QUESTIONS?





BACKUP



Impact of not supporting....

- Access to information
- Embarrassment in interagency, MSPCC, NSC
- In the face of NMS, this is exact mechanism it calls for: two-faced
- Pressure to move on unclassified sharing models
- Slip back into “Intel Centric” mind sets: bi-lateral
- Navy does not develop/understand White shipping beyond Intel experts
- Architecture does not evolve
- Navy not in a leadership position in MDA capability/requirement definition
 - At national level: pressure increases that impacts Navy bill paying
- Navy matures MDA into Portfolio and maybe program of record:
 - Tight linkage with national level opens door to interagency money/support
- Issue with International Agreements: OGMSA helps communicate/align NCC/COCOM regional vision



National Strategic Objectives

Promote Global economic security and Prevent hostile or illegal acts within maritime domain

Detect, deter, and defeat maritime threat

Develop World-wide maritime information exchange

GMSA Strategic Objectives

Maximize transparency in the maritime domain

Create MDA Information Hubs

Create MDA Architecture Hub

Desired Effects

Nations seek stability and control in their sovereign waters

Nations/Agencies/Entities desire to enter collaborative maritime info-sharing relationships

Nations want to be regional leaders for information sharing

Nations/Agencies/Entities remove policy barriers to info-sharing

Nations/Agencies/Entities desire maritime situational awareness

Nations/Agencies/Entities develop incentives to participate in info-sharing

Actions

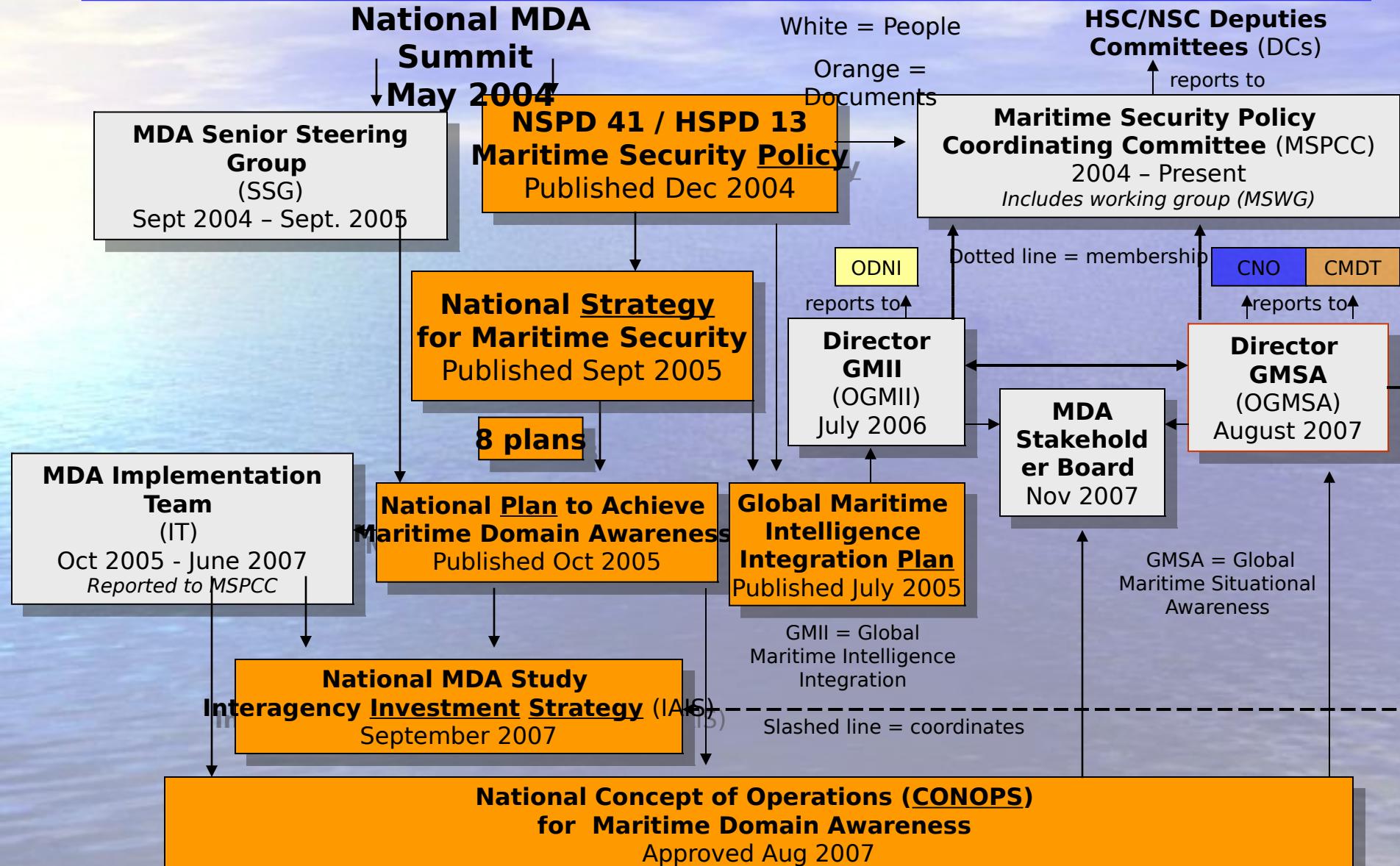
- Promote MDA Architecture - standards & protocols
- Develop / promote info sharing policies
- Promote Information Assurance / Security measures
- Identify policy barriers for removal
- Create open forums to encourage info

- Promote MDA initiatives in International forum
- Monitor implementation of MDA initiatives
- Implement Stakeholder Board Charter
- Create CONOP & Investment Strategy Spirals
- Engage commercial / private sector - info sharing

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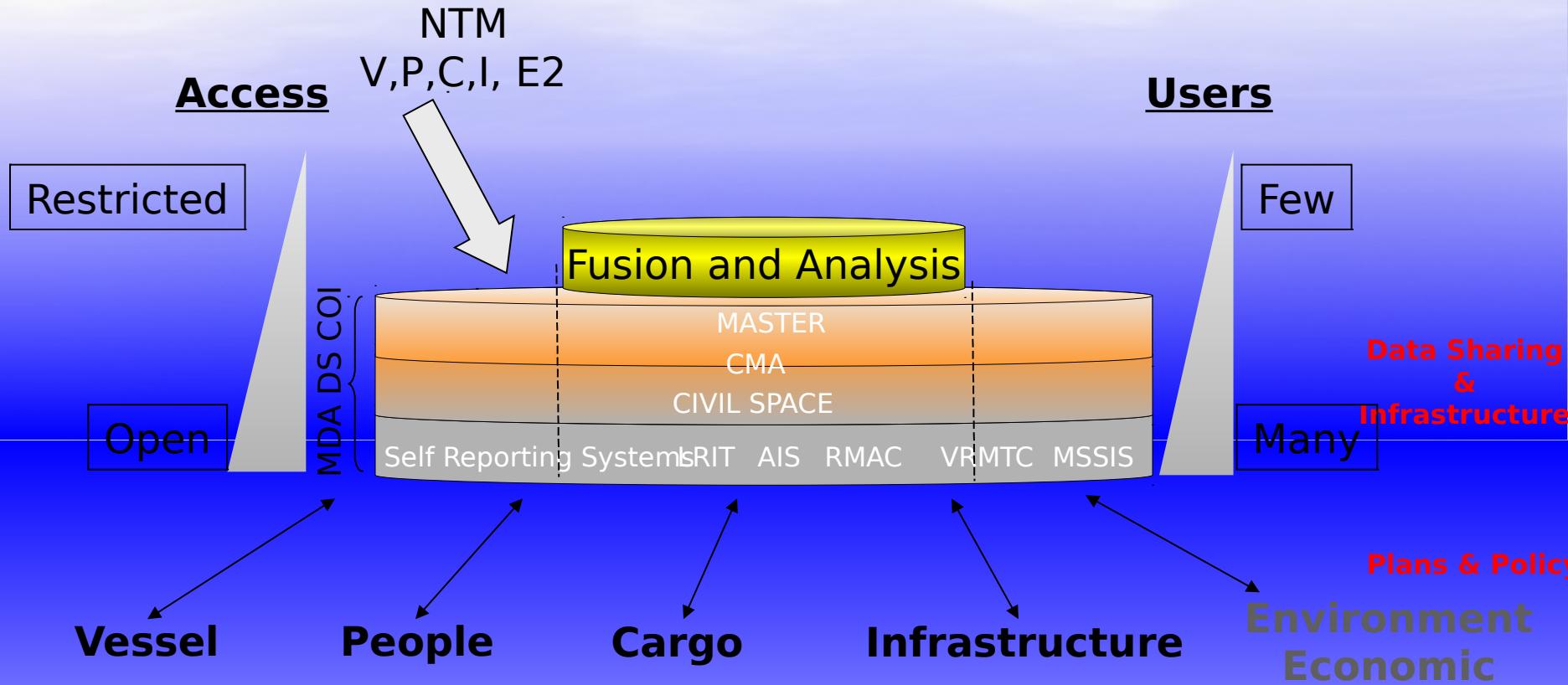
NATIONAL MDA - *Background*



Note: This graphic does not include USCG MDA programs preceding 2004 and continuing - nor the activities of USN or any



Maritime Information Exchange



Global Maritime Community of Interest

Outreach & Coordination



Missi on



GMII Core Process Elements

- Support policy and decision makers at all levels with maritime intelligence analysis and integration;
- Operate a 24 hour-per-day watch that will, among other things, feed the common intelligence picture to the National Maritime Common operating Picture (NMCOP), and be the intelligence enterprise watch center for Maritime Operational Threat Response (MOTR) support;
- Manage and coordinate the Maritime Domain specific information access and integration;
- Carry out the policy decisions and plans of the Director, Deputy Director, and staff. ONI and ICC will continue to provide operational intelligence support to DOD and DHS components as tasked.



Strategic

Objective

Promote Global economic security and Prevent hostile or illegal acts within maritime domain

Detect, deter, and defeat maritime threat

Develop World-wide maritime information exchange

Desired Effects

Nations seek stability and control in their sovereign waters

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Nations/Agencies/Entities desire maritime situational awareness

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Nations/Agencies/Entities remove policy barriers to info-sharing

Nations/Agencies/Entities develop incentives to participate in info-sharing

Actions

- Promote MDA Architecture - Stnds & protocols
- Develop / promote info sharing policies
- Promote Information Assurance/Security measures
- Administer Information Enterprise Hubs
- Administer Architecture Hub
- Promote information sharing initiatives

- Promote MDA initiatives in Intl fora
- Monitor implementation of MDA initiatives
- Implement Stakeholder Board Charter
- Create CONOP & Investment Stgy Spirals
- Engage commercial/private sector - info sharing
- Promote “market drivers” to promote info exchange

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Strategic Objectives

1.0 Create MDA Info Enterprise Hubs

Create and ensure the effectiveness of an inter-agency body that:

- identifies and resolves maritime information sharing barriers,**
- and standardizes data to the maximum extent possible**
- at the federal, state, local, and tribal levels.**

2.0 Create MDA Architecture Hub

Create and ensure the effectiveness of an inter-agency body that:

- builds a National Maritime Architecture (UDOP)**
- enables the flow of all information made discoverable by the Information Hubs.**

3.0 Maximize transparency of vessels in the maritime domain:

- Commercial, AIS required, population**
- Non-AIS mandated population**

4.0 Identify and encourage strategies that enhance national Maritime Security, Safety, and Environment through the use of market drivers.

5.0 - Establish GMSA Office/Staff infrastructure to enable the above



Strategic Contribution

OGMSA Supports and enables.....

A Cooperative Strategy for 21st Century Seapower; Naval Operations Concept; and the Navy Maritime Domain Concept

| Core Capabilities | Implementation |
|---|--|
| Deterrence: Effective Theater Security Cooperation activities are a form of extended deterrence | Improve Integration and Interoperability <ol style="list-style-type: none"><li data-bbox="821 544 1877 659">The Sea Services must—and will—work as one wherever they operate in order to defend the United States.<li data-bbox="821 673 1800 789">New partnerships with the world's maritime commercial interests and the maritime forces of participating nations |
| Maritime Security: A cooperative approach promoting the rule of law by countering piracy, terrorism, weapons proliferation, drug trafficking, and other illicit activities. | Enhance Awareness <ol style="list-style-type: none"><li data-bbox="821 875 1877 1048">... there must be a significantly increased commitment to advance maritime domain awareness (MDA). Reduce the dangerous anonymity of sea borne transport of people and cargoes.<li data-bbox="821 1062 1877 1321">The ability to exchange relevant information across networked military, governmental and private organizations, regardless of nationality ... sharing at the lowest classification level possible offers the highest benefit in terms of gaining trust and substantive cooperation |
| Humanitarian Assistance and Disaster Response: Building on relationships forged in times of calm .. the vanguard of interagency and multinational efforts, both in a deliberate, proactive fashion <p data-bbox="111 1149 764 1415">“Building partnership capacity will promote regional security and stability through more capable, participatory coalitions and alliances.” Naval Operations Concept 2006</p> | Prepare Our People Operations require improved mutual understanding of respective service or agency capabilities and the ability to work together effectively. |



Maritime Security Data Transfer Overview

- Nearly 17 steps to write one report
- Sailors manually input data
- Selected digital photos/scans kept
- About 76MB collected per boarding
- ONI sees about 10% of MIO data

National Agencies

MOC/MHQ



NMIC/ONI



Operational Gap

- Data collection not automated
- Lack of two-way wireless support
- Bandwidth limitations

Operational Gap

- Lack of standardized MIO database
- Inadequate data storage
- Poor collaborative environment
- Bandwidth limitations

Operational Gap

- Poor Collaborative Environment
- Lack of fusion/correlation tools
- Lack of ability to store



The Staffing Package

31 May: CNO guidance: "I approve the 17 in my CNP hat. Get specific words to VADM Harvey."

- Early June:
 - Master package created and routed through all codes for review
 - Package included background on requirement and initial estimate of what people were needed to do perform the functions and tasks
 - Each code responded: comments captured in Tasker package up to CNO
- Late June:
 - Comprehensive package compiled and reviewed with N1:
 - Package included:
 - 16 Billet Staffing Rationale and OPNAV Code feedback
 - details associated with Flag billet
 - details for ADSW Waiver for RDML Metcalf
 - details for CDR Wimmer Extension (with sanctuary)
 - N1 desented: this was not the way to do these efforts.
 - insisted package be broken into parts and worked separately.
 - N5MDA accommodated and worked in pieces
- July:
 - Letter created from CNO to N1 directing that GMSA staffing plan be put together in 30 days.
 - - N1 dissented on the letter: didn't like being directed
 - - N5MDA reframed the letter to their liking: submitted in tasker system
 - - reviewed by VCNO: kicked back to N1 Flag Matters for review
 - - lost for several weeks
 - - letter re-written by N1
 - - finally signed by VCNO in September.
- Status:
 - Metcalf Waiver: Approved at SecNav Level Wimmer Extension: Approved: now in A/C status Disposition of Flag/SES position: pending Disposition of 16 billets: pending

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Core Objectives

►Information: Available; Searchable; and Distributable

- Promote an MDA architecture founded upon net-centric principles; a secure, collaborative, information-sharing environment.
 - Architecture Hub
- Lead the USG collaborative effort to ensure access to maritime information and data critical to building the situational awareness component of MDA.
 - Enterprise Hubs - Vessel, Cargo, People, and Infrastructure
 - Develop and formalize information-sharing policies, protocols, and standards.
- Facilitate the alignment of resources, capabilities, and activities related to global maritime situational awareness.

.....to facilitate timely, accurate decision-making.



Core Process

Lead the Federal effort to develop a collaborative, global, information-sharing environment to provide near real-time maritime situational awareness to the Global Maritime Community of Interest (GMCOI).

Advocate for and ensure that the policy and architecture are in place to support the collaborative, global, information-sharing environment.

Work with a broad range of Federal, State, local, tribal, private sector, and international partners to develop the collaborative, global, information-sharing environment.



Maritime Domain Awareness

- *Maritime Domain Awareness is the effective understanding of anything associated with the global maritime domain that could impact the security, safety, economy, or environment of the United States.* - National Strategy for Maritime Security
- *“Maritime Domain Awareness” (MDA) efforts be undertaken “to develop an enhanced capability to identify threats to the Maritime Domain as early and as distant from our shores as possible by integrating intelligence, surveillance, observation, and navigation systems into a common operating picture accessible throughout the United States*



The Value of GMSA

| Attributes/ Functions Values | Vessel | People | Cargo | Infrastructure | Architecture |
|---|-----------------|--------|-------|----------------|--------------|
| Safety | x | x | x | x | |
| Security | x | x | x | x | |
| Environment | x | | x | x | |
| Commerce | x | x | x | x | |
| Principles | | | | | |
| Inc info sharing | | x | x | x | x |
| x | | | | | |
| multilaterally | | | | | |
| Increase stability of countries | x | | x | x | x |
| No impact to existing systems/agreements | x | x | x | x | x |
| Focus Areas | | | | | |
| DON Proto-type | x | | x | x | |
| x | | | | | |
| DS COI | x | x | x | x | x |
| x | | | | | |
| MSSIS | ASSIFIED | x | | | x |



Objective

Promote global ~~economic~~ stability and protect legitimate activities within maritime domain

Detect, deter, and defeat maritime threats

Develop World-wide maritime information exchange

Desired Effects

Nations/Agencies seek stability and control in their sovereign waters

Nations/Agencies desire to enter collaborative maritime info-sharing relationships

Nations/Agencies desire maritime situational awareness

Nations/Agencies remove policy barriers to info-sharing

Nations want to be regional leaders for info-sharing

Nations/Agencies develop incentives to participate in info-sharing regimes

Immediate Challenges / Priorities for OGMSA

- **Create Information Enterprise Hubs**
- **Create MDA Architecture Hub**
- **Maximize transparency of vessels in the maritime domain**
- **Implement Stakeholder Board Charter**
- **Identify and encourage strategies that enhance national maritime security, safety, and environment**
- **Establish GMSA Office / Staff infrastructure**
- **Engage commercial / private sector - info sharing**